KCGIS CENTER: 2006 FUNDING, RATE SETTING, AND BILLING

Introduction

The King County Geographic Information System (KCGIS) is a coordinated regional geographic information resource, organized to meet the business needs of King County, local agencies, and the general public.

KCGIS is comprised of both the King County GIS Center (an internal service fund, responsible for core GIS resources and enterprise services for the entire County) and business specific activity in various GIS programs distributed across other County departments.

KCGIS activity is coordinated by means of a management level GIS Oversight Committee and an operational level GIS Technical Committee.

KCGIS organization, governance, and operations are described in detail in the annual KCGIS Operations and Maintenance Plan

This document describes the background and details of the King County GIS Center (KCGIS Center) internal service fund, the funding, rate setting, and billing methodology used by the fund, and the current budget and financial plan of the fund.

The King County Geographic Information Systems Fund

Enabling Legislation:

On December 13, 2001 the King County Council approved ordinance 2001-0555 (enactment 14270) creating the King County Geographic Information Systems Fund. The text of the ordinance follows:

> AN ORDINANCE creating the geographic information systems fund, classified as an internal service fund, for the purpose of accounting for financial resources for the full costing of operating, maintaining and enhancing automated geographic information systems that serve both county agencies and external customers; providing for the transfer of geographic information systems assets from the information and telecommunication – data processing fund; amending Ordinance 12076, section 10, as amended, and K.C.C. 4.08.025, as amended, and adding a new section to K.C.C. chapter 4.08.

> PREAMBLE:

> Due to the reorganization of the county's geographic information systems resources into an internal services section within the department of natural resources and parks, it is desirable to create a new geographic information systems internal services fund for the purpose of accounting for financial resources for the full costing of operating, maintaining and enhancing automated geographic information systems.

> Effective January 1, 2002, accumulated undesignated fund balance of two hundred fifty thousand dollars is hereby transferred from the information and telecommunication - data processing fund to the geographic information systems fund. This represents the estimated share of the information and telecommunication - data processing fund's undesignated fund balance that has been contributed by geographic information systems operations.

> BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

> SECTION 1. Ordinance 12076, Section 10, as amended, and K.C.C. 4.08.025 are each hereby amended to read as follows:

> Second tier funds and designated fund managers. Second tier funds and fund managers are as follows, except to the extent that all or a portion of any listed fund is a first tier fund by virtue of any other provision of this chapter or other ordinance:

> | Fund No. | Fund Title | Fund Manager |
> |---|---|---|
> | 548 | Geographic Information Systems | Dept. of Natural Resources and Parks |

> NEW SECTION. SECTION 2. There is hereby added to K.C.C. chapter 4.08 a new section to read as follows:

> A. There is hereby created the geographic information systems fund, classified as a internal service fund, for the purpose of accounting for financial resources for the full costing of operating, maintaining and enhancing automated geographic information systems that serve both county agencies and external customers. For the purpose of this section, "full costing" means all costs associated with operation, maintenance, rental, repair, replacement, central service cost, and department overhead allocation.

> *B. Budget authority for staff and associated operating expenses incurred in managing the county's central geographic information systems shall be transferred from the information and telecommunications services fund data processing subfund to the new geographic information systems fund in the county's 2002 Annual Budget. Ownership of the equipment used to support the county's centralized geographic information systems is hereby transferred to the geographic information systems fund.*
>
> *C. The department of natural resources and parks shall be the fund manager and shall establish charges to recover full costing for geographic information systems fund services and operations.*
>
> *D. Annual appropriations of revenues, beginning in 2002, shall be included in the budgets of those agencies and funds either benefiting from the centralized geographic information systems or receiving services from staff budgeted in geographic information systems fund, or both, which revenues shall be transferred to geographic information systems fund monthly.*

The King County geographic information systems fund operates under the name King County GIS Center (KCGIS Center).

King County Internal Service Fund Purpose, Benefits, & Responsibilities:

King County Code gives internal service funds full financial and operational responsibility to provide designated services. Agencies receiving services or benefiting from internal service fund activities are required to budget for internal service fund costs. In addition, the KCGIS Center fund is chartered to operate on an entrepreneurial basis – both within the county and externally.

The benefits of an internal service fund include:

- Develop annual budget, free from non-fund business interference
- Manage fund finances and carry savings forward from year to year
- Develop cash reserves for specific long term needs
- Own equipment & assets
- Develop staff resources to meet business needs

The responsibilities of an internal service fund include:

- Develop annual budget and workplans within the context of countywide goals
- Manage budget, finances, & assets
- Pay all direct and overhead costs:
  - Staff salary & benefits
  - Hardware, software, furniture, equipment, supplies, & services
  - Training costs
  - Office space rent, phones, email, WAN/LAN
  - All other overhead costs, from audit services to vehicle rental
- Develop customers and ensure revenue to fund operations

KCGIS Center Fund Accounting Structure:

The KCGIS Center was established in 2002 as a 'straddle' fund within the County's financial accounting structure. Straddle funds conduct operations in both King County's original ARMS accounting system and in the IBIS accounting system inherited from former Metro agencies at the time of the County/Metro merger in 1994. The KCGIS Center uses the IBIS accounting system for all expense accounting and the ARMS accounting system for revenue accounting.

IBIS is used for expense accounting because the KCGIS Center originated as a Metro managed capital project responsible for the original County GIS development. IBIS was used by the GIS capital project for expense accounting beginning in 1994, and later by the GIS Technical Resource Center (ITS predecessor to the KCGIS Center) as it assumed responsibility for KCGIS operational services.

The county's ARMS accounting system is used by the KCGIS Center for revenue accounting purposes, because almost all County GIS customers are ARMS agencies. Use of a common accounting system and the

ARMS AIRS interfund transfer process facilitates the efficient transfer of funds from customer accounts to KCGIS Center revenue accounts.

ARMS KCGIS Center Accounting Codes:

Fund number:	000005481
Department:	0011
Low Org.:	1011
Default Task:	1011
Default Project:	111

ARMS KCGIS Revenue Accounts:

Enterprise Operations (O&M):	44885
Client Services:	44886
Matrix GIS Staffing Services Unit:	44887

IBIS KCGIS Center Accounting Codes:

KCGIS Center Dept #:	T3180
DNRP KCGIS Center Appropriation Unit:	3180M
GIS Center Appropriation Unit:	3181M
Matrix GIS Staffing Unit Appropriation Unit:	3182M

Miscellaneous KCGIS Center Financial Identification:

KCGIS Center Federal Tax ID #:	91-6001327
KCGIS Center DUNS #:	07-574-7667
KCGIS Center CCR #:	WPA3SC

The current cash balance in the KCGIS Center internal service fund is publicly available by calling (206) 296-0922 (use ARMS fund number 000005481). For County employees with intranet access, current and historical detailed KCGIS Center internal service fund accounting information is available at:

IBIS: http://ibisreps.metrokc.gov/
ARMS: http://arms/

For budgetary and accounting purposes, each County agency generally includes funds for KCGIS Center services in a designated account within the appropriate department and low org (ARMS agencies) or appropriation unit (IBIS agencies). The designated County account for KCGIS Center internal service fund services is:

Account 55026 GIS O&M
(Note that this account title is somewhat misleading, because it is used by agencies to budget for all KCGIS services, not just GIS O&M services.)

KCGIS Center Funding, Rate Setting & Billing Methodology

General Principles:

The KCGIS Center segments its operations into three 'business lines' each focused on common GIS services and resources. Each business area focuses on the unique value of the specific services offered. Each business line also supports a logical cost allocation methodology to help GIS users understand the basis for individual GIS service cost components. A clear understanding of logical cost components for GIS services allows end user agency managers to make an informed business decision on how to use GIS as a tool for their agency's operations.

Each of the three KCGIS Center business areas (Enterprise GIS Operations, GIS Client Services, and Matrix GIS Staffing Services) share common management and rate setting principles:

- Each business area benefits by shared management, administration, and overhead.
- Costs for shared functions are allocated fairly to each business area.

- Costs specific to a business area are fully allocated to that business area.
- Each business area is fully funded by its own customer base.

KCGIS Center operating costs fall into three broad categories:

- Labor costs (wages & benefits)
- Overhead costs (O/H – includes County and department overhead, rent, phones, email, OIRM, finance, etc.)
- Other direct costs (ODC's – include supplies, services, hardware, software, training, etc. Also included is an annual allocation to the KCGIS Center's long-term equipment replacement fund reserve.)

To ensure that customers fully fund appropriate costs, and to ensure the fair allocation of costs for shared services, a detailed budget/rate development spreadsheet is used to account for all planned costs and to determine a rate that will recover sufficient revenue within each business area.

Overhead Allocation Practices:

KCGIS Center internal management and administrative support costs are allocated to the three business lines as part of the budget development process, based on a calculation of actual costs.

Other KCGIS Center overhead costs (other internal services, CX overhead, DNRP overhead, rent, etc.) are allocated to the three 'lines of business' based on a calculation of significant budget factors, including:

- FTEs
- Major non-FTE specific office resources (KSC server room & training room)
- Dedicated servers
- Major GIS database resources
- Major GIS application resources
- Level of GIS governance involvement

Enterprise GIS Operations (O&M):

The KCGIS Center's core business line is built around enterprise GIS infrastructure and operation services. Specific enterprise GIS operation services are defined on an annual basis in consultation with the King County GIS Technical Committee (comprised of a representative from each County agency that has 'desktop' GIS users). For KCGIS' 2006 budget year these services will be provided by 10.60 FTEs and include:

- KCGIS Center management
- KCGIS governance support (oversight & technical committees, standards & best practices, and annual KCGIS O&M Plan)
- KCGIS program coordination (CRM & marketing)
- Regional GIS contact and coordination
- Spatial Data Warehouse operation and management (SDW administration, content management & metadata management)
- KCGIS Website management
- GIS applications development & management (utilities, back-end apps, Web front-end apps, & desktop front-end apps)
- Data maintenance coordination (coordinate agency data maintenance & QC, external data acquisition & designated enterprise data maintenance)
- GIS-related contract management
- Education & Outreach (brownbag training, help desk, GIS User Group & GIS Day)
- Coordination of designated countywide priority GIS initiatives

- Development, operation, and maintenance of KingStat – the County's performance monitoring and reporting system (new in 2006).

A key characteristic of most core services for enterprise GIS operations is that they are 'fixed-cost' in nature. Total budget costs can be increased or decreased by adding or removing entire 'service offerings,' but costs are typically not greatly effected by the total number of individual users or by the number of agencies that fund the services.

The KCGIS Center develops a preliminary budget to cover proposed enterprise GIS operation services levels for the coming year, in consultation with the Technical Committee. This proposed budget is presented to the GIS Oversight Committee, comprised of managers with budget authority for the major departments served by KCGIS. The GIS Oversight Committee works with KCGIS through the budget development process on two major high-level components of the budget: a) total budget amount, and b) cost allocation model.

The GIS Oversight Committee considers the business value of each of the core enterprise GIS services being proposed. The KCGIS budget typically includes specific FTE and cost allocation for each service offering, to allow a business analysis of the value of providing the service.

Once the GIS Oversight Committee concurs with the proposed budget, they review the O&M funding allocation model. The KCGIS Center's O&M funding model is based on the following premises:

- Enterprise Operations can be defined into discrete categories of GIS services

- The level of work effort and total cost to provide each category of GIS services can be determined objectively via the KCGIS Center's Time Recording System (TRS)

- Distinct GIS user communities can be identified and costs for each of the categories of GIS services can be objectively allocated to one or more of the user communities

- The level of use or benefit for individual agencies within each GIS user community can be measured objectively and O&M costs allocated to each agency on the basis of actual use or benefit

The KCGIS Center allocated all its proposed 2006 budget Enterprise GIS Operations costs into 26 discrete categories of services, based on actual level of effort as documented in TRS. Five distinct GIS user communities were identified (oversight committee sponsors, technical committee members, desktop GIS users, Web based GIS users, and KingStat user agencies). The total cost for each category of GIS services was allocated proportionately to each GIS user community benefiting from the service. The total cost allocated to each GIS user community was allocated to individual agencies within the community on the following basis:

- GIS Oversight Committee sponsors: DOT, DNRP, and DDES are allocated these costs at a 1:1:0.5 ratio. These costs are mostly related to services that support KCGIS governance, standards, outreach efforts, and priority initiatives. This community represents county agencies that have the most significant investment in GIS for their internal operations. These agencies also provide a significant proportion of enterprise GIS data maintenance for KCGIS.

- GIS Technical Committee members: Each of 17 agencies with desktop GIS activity has Technical Committee membership and each is allocated these costs on an equal basis. Costs are related to services that support governance, standards, the spatial data warehouse, back-end applications, data maintenance/coordination, and priority initiatives. This community represents the business and/or technical coordination of GIS services for business end-users in county departments.

- Desktop GIS Users: Agencies are allocated costs that benefit desktop GIS users on the basis of the number of desktop GIS users within each agency. These costs are related to services that support standards, the spatial data warehouse, front-end applications, data maintenance/coordination, training/help desk support, and priority initiatives. This community represents KCGIS end users that use desktop GIS and costs are based on the actual number of GIS 'seats' within each department.

- Web GIS Users: Agencies are allocated costs that benefit Web GIS users on the basis of the number of 'hits' on KCGIS Web Mapping applications within each agency. These costs are related to services that support the spatial data warehouse, front-end Web applications, training/help desk support, and

priority initiatives. This community represents KCGIS end users that use Web GIS mapping and costs are based on the actual annual recorded number of 'hits' on the KCGIS Web mapping applications within each department.

- KingStat User Agencies: Each of the seven agencies that report to the King County Executive are allocated an equal share of 2006 budgeted costs to develop, implement, operate, and maintain the County's new KingStat performance monitoring and reporting system. This is a new KCGIS Center program for 2006. It is anticipated that in future years, costs will be allocated to agencies based on the proportion of total individual KingStat measures for each agency.

The aggregate of costs from each of these GIS user communities is allocated to each agency, to determine each agency's total share of the GIS O&M funding model. Some agencies may have costs from just one community, while others may have costs from two, three, four, or all five. The inclusion of agencies that will use KingStat services resulted in an increase in the number of agencies for the 2006 O&M funding model to a total of 35.

Once GIS Oversight Committee concurrence for the proposed budget and funding model has been secured, the budget is still subject to the same review and approval process that each fund faces for their annual budget. This process includes extensive review by the county budget office, followed by further review and approval of the proposed budget by the County Executive for his budget submittal to Council. Once approved by the Council, the budget is finalized.

Once the budget year begins, the KCGIS Center obtains signed AIRS automated interfund transfer forms from each of the agencies included in the KCGIS Enterprise Operations (O&M) funding model. The signed AIRS forms are submitted to ARMS accounting staff, so that the approved budgeted funding is automatically transferred on an annual or quarterly basis from each agency to the KCGIS internal service fund by the County's automated financial system.

GIS Client Services:

King County experience has been that all county agencies require customized, on-demand GIS services on occasion. This is true of departments with their own GIS staff (perhaps during periods of peak work load or for very specialized types of service) and of departments with no integral GIS capability (perhaps needing services as simple as making a map or helping an employee learn to use a web based application).

KCGIS Center provides on-demand GIS client services to meet the unique or unanticipated needs of county business units. Typical services provided by the 5.65 FTEs budgeted for this business line in 2006 include:

- GIS training
- GIS programming
- Custom mapping
- GIS data development or maintenance
- Short-term GIS staffing
- GIS needs assessment, planning, and implementation support
- GIS data sales

Because of the on-demand nature of client services work, budget projections are speculative. KCGIS includes estimated costs and revenues for GIS client services as it develops its proposed annual budget, based on current year trends, past history, and conversations with client agencies who may request increased or decreased client services budgeting. Budgeted costs include labor and direct client services costs (supplies, services, hardware, software, training, etc.), plus an allocated proportion of KCGIS Center overhead, management, and administration.

As the budget is developed, an hourly billing rate for the budget year is calculated by dividing total projected costs (labor, overhead, management, administration, and other direct costs) by the total number of projected billable hours. Annual average billable hours for individual client services staff are calculated by subtracting estimated employee leave and non-billable work hours from a nominal total of 2088 payroll hours per year. Specific types of leave and non-billable work hours include:

- Leave (holidays, vacation, sick leave, jury duty, FMLA, etc.
- Personal administration time (payroll, benefits, etc.)
- KC & Div administration time (KC activity, communications, office, equipment, etc.)
- Section administration (time records, performance monitoring, meetings, etc.)
- Training & professional development
- Client services marketing and customer relationship management
- Product & service research and development

For 2006, the calculated annual average net billable hours per client services FTE is 1436.

The net annual estimated billable hours per client services FTE is multiplied by the total FTEs budgeted for client services work to determine total estimated billable hours. This total is divided into the total labor, supplies, management, administration, and overhead budget for client services to determine the hourly billing rate for the budget year.

Some products or services (GIS data CD sales, map printing, and training classes) are provided on a per unit basis. Per unit costs are calculated from the hourly billing rate, plus the cost of any consumable products or special equipment.

The KCGIS Center Client Services group also manages rental of the County's King Street Center Computer Training Facility to non-King County users. The facility is owned jointly by KC DOT and DNRP. Revenue from rental to non-County users is held in a KCGIS Center designated fund reserve, for future Computer Training Facility equipment replacement.

In addition, a budget is proposed for other direct non-labor reimbursable costs (media, software, commercial data, contracted consulting, etc.) that would typically be billed to clients separately.

During the budget development process, KCGIS typically seeks budget commitments from departments for client services work for the coming year. For 2006 these revenue commitments total approximately 63% of the proposed client services budget. For budget purposes, an additional 14% of proposed revenue is described as contingent from county agencies, and another 23% as contingent from outside agencies.

Even though departments commit to reserve funds in their budget for KCGIS client services work, the decision to spend budgeted funds (or other department funds if agency workload warrants) is made on a case-by-case basis by individual agency business unit managers. In effect, these managers make an individual cost/benefit analysis when they decide to spend agency funds for specific on-demand GIS client services.

For KCGIS client services, budget review and approval does not directly involve client agencies. The KCGIS case to the budget office, Executive, and Council for this portion of the proposed budget is based on the funding reserve commitments, previous years actual client services activity, and a recognition of a reasonable contingency to accommodate peak demand or emergency workload. This component of the proposed budget does not go through review by the KCGIS Technical and Oversight committees, but is subject to the same Budget Office, Executive, and Council review and approval process as outlined above.

Once the budget year begins, agencies are billed for GIS client services work after work is completed, or monthly for projects that may extend over two or more months.

Agencies can also prepay for GIS client services, establishing an account with the KCGIS Center that can be used to obtain future GIS training, services, or products at the rate in effect when the services are actually provided.

GIS client services revenue is posted as received to the KCGIS internal service fund by the County's accounting services division.

Matrix GIS Staffing Services Unit:

Several King County departments have dedicated business specific GIS units or individual GIS staff. KCGIS Center directly manages and/or staffs GIS operations for six divisions in the County's Department of Natural

Resources and Parks (DNRP) and Department of Transportation (DOT), and offers this service to other departments as well. Staff levels for six divisions are agreed annually on a 'negotiated level of service' basis. The divisions benefit by reduced costs from pooled management and enhanced efficiency resulting from higher professional standards, cross training, redundancy, and best practices.

Each division designates a GIS matrix manager, who is responsible both for evaluating the level of business need for direct GIS services within their division, and for coordinating the assignment of allocated staff to work on specific projects. Typical services provided by the 12.75 FTEs budgeted for this business line in 2006 include:

- Data development and maintenance
- Custom application development
- Mapping
- GIS data analysis
- End-user training and support

KCGIS includes costs and revenues for Matrix GIS staffing services as it develops its proposed annual budget. In addition to the labor and direct costs (supplies, services, hardware, software, training, etc.) described above, funding and rates include an allocated proportion of KCGIS Center overhead, management, and administration. Initial budget review and approval is with the division GIS matrix manager, as well as division and department finance managers. This process ensures that there is customer support for proposed budget, based on the business value provided by the GIS staffing services. This component of the proposed budget does not go through review by the KCGIS Technical and Oversight committees, but is subject to the same Budget Office, Executive, and Council review and approval process as outlined above.

Once the budget year begins, the KCGIS Center obtains signed AIRS automated interfund transfer forms from each of the DNRP and DOT divisions included in the Matrix GIS Staffing Services Unit funding model. The signed AIRS forms are submitted to ARMS accounting staff, so that the approved budgeted funding is automatically transferred on a quarterly basis from each agency to the KCGIS internal service fund by the county's automated financial system.

KCGIS Center 2006 Budget, Rate, and Financial Plan Detail

- Get the KCGIS Center 2006 Expense Budget (pdf)
- Get the KCGIS Center 2006 Revenue Budget (pdf)
- Get the KCGIS Center 2006 Financial Plan (pdf)

How can I get more information?

Contact Greg Babinski, KCGIS Center Finance & Marketing Manager at greg.babinski@metrokc.gov, or at 206-263-3753.

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